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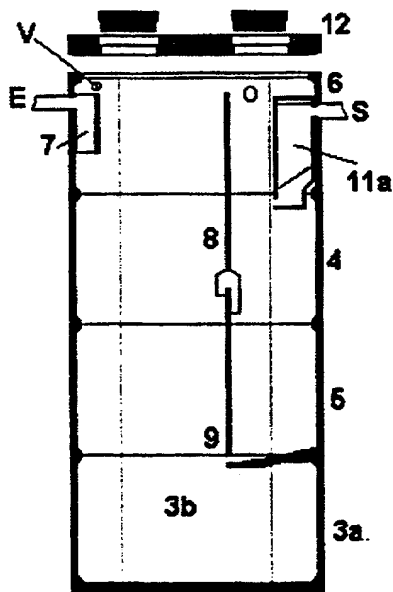
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(54) Title: PREFABRICATED BIOLOGICAL PURIFICATION SYSTEM

(54) Título: SISTEMA PREFABRICADO DE DEPURACION BIOLOGICA



(57) Abstract: The invention relates to a prefabricated biological purification system, whereby said system is a complete facility for the purification of domestic wastewaters and forms part of the technological field of civil engineering, more particularly, the field of black water treatment systems. Said purification system is a very versatile system due to the fact that it can be used in different types of constructions such as individual homes, condominiums, buildings, towns, etc. including a unitary facility or multiple facilities depending on requirements. Said prefabricated biological purification system comprises two basic units consisting of two containers whose size varies depending on the type and equipped with all modular elements, bottom, walls and lids, in addition to all complementary internal elements. The shape of all components makes them easy to handle, transport and assemble and no special machinery or skilled labor are required. The system operates as follows: in the first unit, which is a prefabricated biological purifier, patent C.R. 2540 and patent application EPO 98108512.9, that includes internal and external variations for optimized operation, the first and most important purification phase is effected, wherein the black waters are treated in three successive phases involving aerobic and anaerobic fermentation and decanting, it is possible to internally recirculate the sludges and the effluent of the purifier enters the second unit where it is evenly distributed by means of a liquid distributor. Purification is completed in said unit by oxidation of contaminating matters as a result of a bacterial film that covers the filling material. A successive aerobic and partly anaerobic fermentation phase is carried out in said unit. The effluent of the system can be emptied into a receptacle involving no further treatment. In view of the fact that the prefabricated biological purification system does not produce any sludges, no regular

maintenance or cleaning is required. It involves no operating costs due to the fact that no machinery is need for internal operation. It has no environmental impact in view of the fact that the entire facility is built underground.

(57) Resumen: El sistema prefabricado de depuración biológica, es una instalación completa para la depuración de las aguas residuales domésticas, y se enmarca en el sector tecnológico de la construcción civil, específicamente en el campo de los sistemas para el tratamiento de las aguas

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